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(54) Title: REGISTRATION BASED MAIL-ADDRESSING SYSTEM
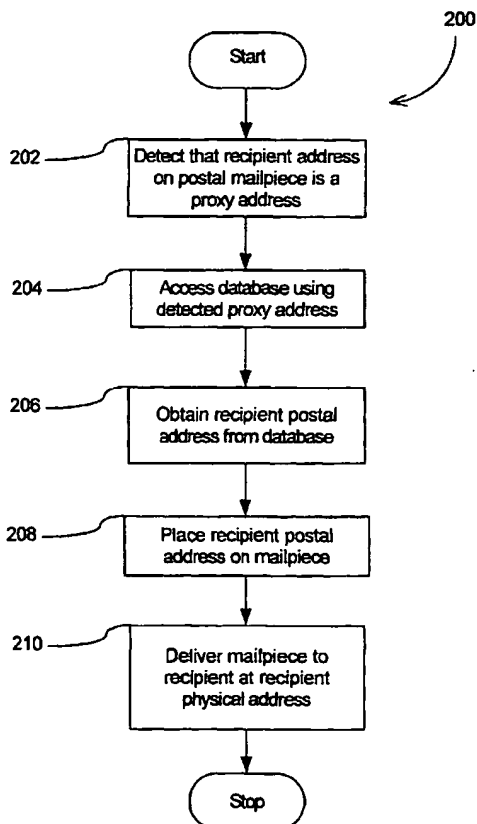
(57) Abstract: A method, system and product for delivering a postal mailpiece to a recipient address. A registration based mail-addressing protocol is utilized that allows a postal recipient to create and maintain a proxy address, which is dynamically associated with the recipient's postal address and is more simple than the postal address. The sender of a postal mailpiece addresses the mailpiece with the simplified proxy address instead of the burdensome recipient postal address. The method, system and product allows recipients to create and manage proxy addresses (202), detects a proxy address on a mailpiece and take the appropriate measures to deliver the postal mailpiece to a physical address corresponding recipient postal address (204-210).

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REGISTRATION BASED MAIL-ADDRESSING SYSTEM

BACKGROUND

This invention relates to postal mailpiece delivery and, in particular, to a registration based mail-addressing system for delivering postal mail to recipient physical

5   addresses.

Referring to FIG. 1, the current postal delivery scheme operates through the correspondence of two levels of addresses: one level consists of the physical address or geographic location, and the second level consists of a postal address 20 that corresponds to the physical address. Thus, the current accepted system of postal

10   addressing requires that a sender utilize a postal address 20 which corresponds specifically to a single physical address or location of the mailpiece's destination.

A physical address or location is typically a domicile or place of business. This term describes the actual destination of a mailpiece 10. A physical address need not be expressed in a prescribed format. Instead it may typically be based on intuitive

15   elements necessary to describe the location to those familiar with an area or able to follow clear directions. Examples include, but are not limited to, "the large glass building at the corner of Main Street & Grove Avenue" or "the second house on the left, just past Warren G. Harding Elementary School." Additionally, physical addresses might be described by reference to a grid system, for example in latitude and longitude.

20   Postal addresses 20 are more formalized expressions of location. Postal addresses 20 contain prescribed information in a closely mandated format. There are

numerous postal address 20 formats, but for any given format each postal address 20
describes a unique location. When presented as such, a mail handling entity can use the
postal address for delivery of a mailpiece 10 to a physical address or location. Not all
physical locations have a postal address 20 due to carrier limitation, location

5   remoteness, or failure to be recognized by postal authorities. Examples of postal
addresses 20 are listed below in Table I.

Table I

Type of Postal Address	Postal Address Format
A. Street Address	151 E. 51ST ST Apt. 2B New York, NY 10022
B. Post Office box address	PO Box 2378 Burlingame, CA 94010-2378
C. 11-digit delivery point zip code	94025-3271 04
D. Corporate post address	CA5-162-13, Dept 4

FIG. 1 illustrates a typical postal mailpiece 10. The mailpiece 10 comprises

10   an envelope 12 that is addressed with a sender or return postal address 14 and a
recipient postal address 20. Also illustrated is a postage marking 16, which is required
for the United States Postal Service (USPS) or other mail handling entity to deliver the
mailpiece 10 to the recipient physical address 20. It should be appreciated that the
mailpiece 10 is not limited to envelopes and that the mailpiece 10 may be a postcard,

15   flat, periodical, package, box, or any other parcel suitable for delivery. It should also be
appreciated that the postage marking 16 is not limited to a stamp and may be a postage

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meter marking, pre-printed postage marking, franker marking or any other form of

postage employed by mail handling entities. It should further be appreciated that mail

handling entities may include, but are not limited to public postal systems (e.g. USPS),

private postal systems (e.g. FedEx), messenger service, or internal corporate mail

5   systems (e.g. inter/intra office mail).

In the case of a mailpiece sent via the USPS, the recipient postal address 20

must include numerous fields if it is to be delivered to the correct physical address

associated with the postal address 20. These fields include recipient name 22, first

recipient address line 24 (often referred to as address line 1), second recipient address

10   line 26 (often referred to as address line 2), city 28, state 30 and zip code 32 fields.

The illustrated zip code 32 represents the "zip+4" zip code format that facilitates

improved automated handling by mail handling entities. It should be noted that if the

mailpiece 10 is destined for a corporation, law firm, or other organization, then the

recipient address 20 may include fields in addition to those illustrated in FIG. 1. Thus,

15   the sender of the typical mailpiece 10 must correctly transcribe at least six fields of

recipient information onto the mailpiece 10 to ensure that the recipient postal address

20 properly identifies the recipient and the recipient's physical address.

The use of the conventional recipient postal address 20 has several

disadvantages that may discourage the sender from using postal mail delivery. As can be

20   seen from FIG. 1 and Table I, for postal addresses A and B, the address 20 is lengthy

and requires numerous fields 22, 24, 26, 28, 30, 32 that are non-intuitive. Similarly, as

seen in FIG. 1 and Table I, for postal address C, the 11-digit zip code postal address is

shorter, but consists of a non-intuitive series of 11 numbers. In either case, the

recipient's postal address 20 is very difficult for a sender to recall. Often times, the

sender must look up the address 20 in a personal address book, public telephone

5   directory, or other source or sources prior to addressing the mailpiece 10. Address

lookup is time consuming and makes the postal mailing process inconvenient and

aggravating for the sender, which may prevent the sender from using postal mail in the

future. Moreover, even when the sender has retrieved the address information, the

length of the recipient postal address 20 increases the likelihood that the sender will

10   make an error when transcribing the address 20 on to the mailpiece 10. Thus, there is a

desire and need to reduce the length and information required in the recipient postal

address 20.

The use of the recipient postal address 20 is also disadvantaged because it is

tied to a physical location. Since the recipient postal address 20 includes specific

15   address fields that identify a physical location (e.g., a recipient's home or office), the

postal address 20 will change when the intended recipient (or business) changes

locations. The expense associated with the address change and the cost of misdirected

correspondence can be considerable; particularly when a business moves and the postal

address 20 is associated with the changed business address. Thus, it is desirable to

20   eliminate the expenses and confusion associated with a recipient's address change.

5

Moreover, physical addresses are perpetual. That is, as long as a recipient

remains at the same physical address, a sender can always send a mailpiece 10 to the

recipient if she knows the correct recipient postal address 20. There may be times when

a recipient desires to prevent the delivery of mailpieces to the physical address. Thus,

5   there is a desire and need to prevent future correspondence to an intended recipient

without the intended recipient having to move from the physical address.

Moreover, the recipient postal address 20 could be a security or privacy risk if

obtained for use by the wrong individual or organization. For example, there are times

when a recipient would like to receive a mailpiece 10 at home, but does not want to

10   give out her home address. This may arise, for example, when a recipient responds to

an advertisement, catalog, or other notice for the delivery of an item to the recipient's

physical home address. The individual may wish to keep her home physical location

non-public for several reasons. There are many examples of privacy issues, almost too

many to list, but some examples include preventing stalkers, criminals, photographers,

15   news media, and others from gathering at a recipient's home. Unfortunately, using the

conventional mailpiece addressing scheme, in order for a sender to send a mailpiece 10

to the recipient's home, the sender must have the recipient's physical home address to

apply the recipient postal address 20 to the mailpiece 10. This requires the recipient to

disclose her physical location despite the risks associated with doing so. Thus, there is a

20   desire and need for a mailpiece delivery system that allows the mailpiece 10 to be

delivered without disclosing the recipient's actual physical location to the sender or general public.

It should be noted that some recipients rent post office box ("P.O. box") addresses in an attempt to avoid disclosing their actual physical location to a sender.

5   P.O. box addresses, however, must contain at least the first recipient address line 24, city 28, state 30 and zip code 32 fields in order for the mailpiece 10 to be delivered to the correct P.O. box. Therefore, P.O. boxes represent an incomplete solution to the privacy concern, as the sender obtains the recipient's city and state information from the recipient P.O. box address, inhibiting the privacy resulting from the P.O. box's use. In

10   addition, P.O. box addresses are quite lengthy and require the sender to remember several fields 22, 24, 28, 30, 32 of addressing information, thus suffering from the same drawbacks noted above. Further, P.O. box addresses are tied to a physical location, namely a post office or commercial location near the recipient's physical location, thus presenting difficulties in the event of changes of location. Lastly, using a P.O. box

15   creates inconvenience for the mail recipient, forcing the recipient to receive and collect mail from the post office location.

While the a foregoing example identifies limitations of the addressing scheme utilized by most private and public mail handling entities, proprietary addressing schemes used by corporate mail systems suffer from the same limitations of complexity,

20   non-intuitiveness, location dependence and non-privacy.

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Moreover, it is a disadvantage of the current postal addressing system that any mail handling instructions such as, e.g., mail forwarding, temporary hold of mailpieces 10, and routing mailpieces 10 between physical locations, is a cumbersome process typically involving the completion, submission and processing of paper-based

5   instructions. An easier and more efficient process for providing and processing detailed mail handling instructions would be useful, for example when a recipient or corporation desires to route mail between many physical locations without the undue burden of filing papers with the mail handling entity or informing the sender of the different physical addresses.

10   Moreover, it is a disadvantage of the current postal addressing system that it does not permit the recipient to customize or personalize its recipient postal address 20. A customized or personalized postal address 20 could be used to identify the recipient, the recipient's line of business, or other element in a manner that would make it easy to remember the recipient postal address 20. For example, a customized or personalized

15   postal address 20 could be used by a political campaign so party supporters can send mailpieces 10 to a specific party or politician. A customized postal address 20 could similarly be used for marketing, promotions and other situations where mnemonics and/or an intuitive personalized address would aid the sender in originating a postal mailpiece 10.

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Moreover, it is a disadvantage of the current postal addressing system that it

makes it difficult or impossible to track mail on a recipient basis. The tracking of mail

could be useful when implementing a pre-paid postage system or other value-added

service. The tracking of mail based on a recipient could also be used to analyze the

5   recipient's mail flow, allowing a recipient to better manage incoming mail.

SUMMARY

The present invention provides a method, system and article of manufacture

for delivering a postal mailpiece. The present invention also provides a method, system

and article of manufacture for creating and maintaining proxy addresses for a postal

10   mailpiece. The present invention further provides a method, system and article of

manufacture for providing mail management tools such as mail forwarding, temporary

hold, and routing between physical locations. The present invention also provides a

method, system and article of manufacture for providing mail-based value-added

services. The present invention also provides a method, system and article of

15   manufacture for implementing a corporate or business internal mail system.

A first method comprises the steps of detecting a proxy address on the postal

mailpiece, using the detected proxy address to obtain a recipient postal address from a

list of recipient postal addresses and associated recipient proxy addresses, and delivering

the mailpiece to the physical address associated with the obtained recipient postal

address. According to the method, proxy addresses and postal addresses contained within the list are defined by postal recipients associated with the proxy addresses.

In another aspect of the invention, another method of delivering a postal mailpiece is provided. The method comprises the steps of detecting a proxy address on

5 the postal mailpiece and using the detected proxy address to obtain a recipient postal address from a database of recipient postal addresses and associated recipient proxy addresses. Postal recipients associated with the addresses define the proxy addresses and corresponding postal addresses, and the relationship between all such addresses within the database. The method also comprises affixing the obtained recipient postal address

10 to the postal mailpiece so that the mailpiece can be delivered to the physical address associated with the so obtained recipient postal address.

In yet another aspect of the invention, a method of identifying a recipient postal address from a postal mailpiece comprising a proxy address is provided. The method comprises the steps of detecting the proxy address on the postal mailpiece and

15 using the detected proxy address to obtain a recipient postal address from a list of recipient postal addresses and associated recipient proxy addresses. Proxy addresses contained within the list are defined by postal recipients associated with the proxy addresses.

In a further aspect of the invention, a method of managing a delivery of a

20 mailpiece is provided. The method comprises the steps of inputting a proxy address, inputting mail handling instructions associated with this input proxy address, the

instructions defining a manner in which mailpieces are to be delivered to a physical

address associated with the input proxy address, and storing the proxy address and

associated mail handling instructions in a list of proxy addresses and mail handling

instructions.

5   In yet another aspect of the invention, a method of creating, changing,

updating and maintaining proxy addresses for use with postal mailpieces is provided.

The method comprises inputting a proxy address, inputting a recipient postal address

associated with the input proxy address, and storing the proxy address and associated

recipient postal address in a list of proxy addresses and associated recipient postal

10   addresses.

In a further aspect of the invention, a method of providing value-added

services for a mailpiece is provided. The method comprises detecting the proxy address

on the postal mailpiece, using the detected proxy address to obtain a recipient value-

added service from a list of recipient value-added services and associated recipient proxy

15   addresses, and tracking a delivery of the mailpiece to provide the obtained value-added

service.

In another aspect, the system for delivering a postal mailpiece is provided.

The system comprises a computer readable storage medium and a first database

interface computer. The storage medium comprises a database of proxy addresses and

20   associated recipient postal addresses, the addresses within the database being defined by

postal recipients associated with the addresses. The first database interface computer is

coupled to the storage medium by a communication medium. The first database

interface computer inputs a proxy address obtained from the postal mailpiece, accesses

the database with the input proxy address to obtain an associated recipient postal

address, wherein the postal mailpiece is subsequently delivered to the physical address

5   associated with said obtained recipient postal address.

In a further aspect of the invention, a system for creating a proxy address for

a postal mailpiece is provided. The system comprises means for inputting the proxy

address, means for inputting a recipient postal address associated with the input proxy

address, and means for storing the proxy address and associated recipient postal address

10   in a database of proxy addresses and associated recipient postal addresses.

In a further aspect of the invention, a system for identifying a recipient postal

address from a postal mailpiece is provided. The system comprises means for detecting

the proxy address on the postal mailpiece and means for using the detected proxy

address to obtain a recipient postal address from a list of recipient postal addresses and

15   associated recipient proxy addresses, wherein proxy addresses contained within the list

are defined by postal recipients associated with the proxy addresses.

In another aspect of the invention, a system for managing a delivery of a

mailpiece is provided. The system comprises means for inputting a proxy address,

means for inputting a mail handling instruction associated with this input proxy address,

20   the instruction defining a manner in which mailpieces are to be delivered to a physical

address associated with the input proxy address, and means for storing the proxy

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address and associated mail handling instruction in a list of proxy addresses and mail handling instructions.

In yet a further aspect of the invention, a system for providing value-added services for a mailpiece is provided. The system comprises means for detecting the

5   proxy address on the postal mailpiece, means for using the detected proxy address to obtain a recipient value-added service from a list of recipient value-added services and associated recipient proxy addresses, and means for tracking a delivery of the mailpiece to provide the obtained value-added service.

In another aspect of the invention, an article of manufacture is provided.

10   The article comprises a machine-readable storage medium having stored therein indicia of a plurality of machine-executable control program steps. The control program comprises the steps of detecting a proxy address on a postal mailpiece, using the detected proxy address to obtain a recipient postal address from a list of recipient postal addresses and associated recipient proxy addresses, and delivering the mailpiece to a

15   physical address corresponding to the obtained recipient postal address, wherein proxy addresses contained within the list are defined by postal recipients associated with the proxy addresses.

In a further aspect of the invention another article of manufacture is provided. The article comprises a machine-readable storage medium having stored

20   therein indicia of a plurality of machine-executable control program steps. The control program comprises the steps of detecting a proxy address on a postal mailpiece, using

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the detected proxy address to obtain a recipient postal address from a database of

recipient postal addresses and associated recipient proxy addresses, the addresses within

the database being defined by postal recipients associated with the addresses, and

affixing the obtained recipient postal address to the postal mailpiece so that the

5   mailpiece can be delivered to a physical address corresponding to the obtained recipient

postal address.

In yet a further aspect of the invention, another article of manufacture is

provided. The article comprises a machine-readable storage medium having stored

therein indicia of a plurality of machine-executable control program steps. The control

10   program comprises inputting a proxy address, inputting a recipient postal address

associated with the input proxy address, and storing the proxy address and associated

recipient postal address in a list of proxy addresses and associated recipient postal

addresses.

In a further aspect of the invention, another article of manufacture is

15   provided. The article comprises a machine-readable storage medium having stored

therein indicia of a plurality of machine-executable control program steps. The control

program comprises detecting the proxy address on the postal mailpiece and using the

detected proxy address to obtain a recipient postal address from a list of recipient postal

addresses and associated recipient proxy addresses, wherein proxy addresses contained

20   within the list are defined by postal recipients associated with the proxy addresses.

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In another aspect of the invention, another article of manufacture is provided. The article comprises a machine-readable storage medium having stored therein indicia of a plurality of machine-executable control program steps. The control program comprises inputting a proxy address, inputting a mail handling instruction

5   associated with this input proxy address, the instruction defining a manner in which mailpieces are to be delivered to a physical address associated with the input proxy address, and storing the proxy address and associated mail handling instruction in a list of proxy addresses and mail handling instructions.

In a further aspect of the invention, another article of manufacture is

10   provided. The article comprises a machine-readable storage medium having stored therein indicia of a plurality of machine-executable control program steps. The control program comprises detecting the proxy address on the postal mailpiece, using the detected proxy address to obtain a recipient value-added service from a list of recipient value-added services and associated recipient proxy addresses, and tracking a delivery of

15   the mailpiece to provide the obtained value-added service.

It is an object of the invention to provide a method of delivering a postal address using a registration based mail-addressing system.

It is an object of the invention to provide a system and article of manufacture for delivering a postal mailpiece using a registration based mail-addressing protocol.

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It is a further object of the invention to allow a postal mailpiece to be

addressed with a recipient proxy address.

It is a further object of the invention to deliver a postal mailpiece that

contains a recipient proxy address to the correct recipient physical location.

5   It is a further object of the invention to deliver a mailpiece to a physical

location without disclosing the recipient's physical location to the sender.

It is yet a further object of the invention to allow a recipient to customize or

personalize its proxy address.

It is a further object of the invention to provide a method of creating and

10   maintaining a proxy address for use on a postal mailpiece.

It is a further object of the invention to provide a system and article of

manufacture for creating and maintaining a proxy address for use on a postal mailpiece.

Other objects, features and advantages of the present invention will become

apparent from the following detailed description and drawings of preferred

15   embodiments of the present invention.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an illustration of a typical postal mailpiece.

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FIG. 2 is an illustration of a postal mailpiece containing a proxy address in accordance with an embodiment of the invention.

FIG. 3 is an exemplary database used to correlate recipient proxy addresses to recipient names and postal addresses.

5   FIG. 4 is a flowchart illustrating an exemplary method of delivering a postal mailpiece containing a proxy address.

FIG. 5 is a block diagram illustrating an exemplary system for implementing the registration based mail-addressing system and method of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

10   The invention establishes a registration based mail-addressing system that allows a recipient to create a proxy address that can be used by senders to send mailpieces to the recipient. As will become apparent, the proxy address allows mailpieces to be delivered to the recipient without the sender knowing the recipient's postal address or physical location. The proxy address adds a new level to the typical

15   postal addressing scheme. As noted earlier, the typical addressing scheme contains two levels. The first level is the physical address and the second level is a multi-field postal address that is difficult to remember, non-intuitive and suffers from several other drawbacks. Using the invention, a new level is established in which a proxy address correlates to an identified recipient postal address.

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As described above, postal addresses suffer from numerous limitations due to, for example, format complexity, the number of data fields, the fixed relationship between each postal address and a corresponding physical address, and an inability to be personalized or customized to reflect recipient needs. The present invention introduces

5   proxy addresses, which allow a dynamic relationship between mail recipients and postal addresses, providing ease of use, flexibility and the potential to provide value added services.

Proxy addresses, as embodied within the invention's registration-based mail-addressing system, provide a more powerful, easier to use addressing regime than

10   traditional postal addresses. Each unique proxy address relates to a mailpiece recipient. Mailpiece recipients may be individuals, businesses or institutions. In defining a proxy address, the registrant associates a postal address that satisfies the requirements of mail handling entities and allows delivery of mail pieces to a physical location. As will be described below in more detail, a proxy address system comprises elements including a

15   recognizable format or presentation protocol, a system able to recognize the presence of said format or presentation protocol, a database relating individual proxy addresses to postal addresses, a means of comparing recognized proxy addresses upon mailpieces to proxy addresses within a database, a means to retrieve correct postal addresses relating to a given proxy address, and a means to affect proper delivery of such a mailpiece.

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A proxy address may be manifest in any one of a multitude of potential formats or presentation protocols (a non-exhaustive exemplary list is provided hereafter), and it is expected, but not required, that the format will provide for a simple presentation of data (i.e., a one-line or two-line proxy address format may be used by

5   the invention). Moreover, the recipient can customize and personalize the proxy address so that it better reflects the personal or business interests of the recipient (as opposed to a physical location of the recipient). The proxy address does not include a physical address and thus, does not change if the recipient relocates. The proxy address may be easy to remember or identify because it may be composed of mnemonics or

10   intuitive elements that identify the recipient. Moreover, the proxy address is a more useful tool for managing mail flow because the recipient never has to change it, even if she relocates frequently. Instead, a recipient will simply modify the relationship between a proxy address and the correct postal address. Since the proxy address may only contain one-line of information, it substantially reduces the chances for errors

15   when the sender places the address on the mailpiece.

FIG. 2 illustrates a postal mailpiece 110 containing an exemplary proxy address 120 in accordance with an embodiment of the invention. As noted above, the proxy address 120 replaces the multi-field, multi-line recipient postal address 20 (FIG. 1) of the conventional mail-addressing scheme. The mailpiece 110, which in the

20   illustrated embodiment is an envelope 12, also contains a sender/return postal address 14 and a postage marking 16. It should be noted that that the mailpiece 110 is not

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limited to envelopes and that the mailpiece 110 may be a postcard, flat, periodical,

package, box, or any other parcel suitable for delivery by the USPS, or any other private

or public mail handling entity. It should be noted that the postal marking 16 is not

limited to a stamp, but may be any postal marking acceptable to mail handling entities

5   including, but not limited to, a postage meter marking, pre-paid postage marking or

franking marking.

One key feature of the proxy address 120 utilized by the invention is that the

recipient creates, modifies and updates the proxy address 120 and the relationship

between each proxy address and corresponding postal address. As an example of the

10   added functionality provided by the invention, a recipient can establish separate proxy

addresses 120 for her home postal address and work postal address and other postal

addresses, if desired. The recipient never has to change her proxy address 120 (or

addresses) and thus, never has to give out a new proxy address 120 when she moves or

gets a new job.

15   FIG. 3 illustrates several data fields in an exemplary proxy address database

250 used to correlate recipient proxy addresses 120 to recipient names and postal

addresses. The database 250 includes a table of identifiers for the recipient proxy

address 120, recipient name 254 and recipient postal address 256. The illustrated proxy

address database 250 includes a number of example entries 260a, 260b, 260c, 260d,

20   260e (collectively referred to herein as "entries 260"). It should be appreciated that the

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exemplary data fields illustrated in FIG. 3 are by no means a complete list of potential

database fields, but are provided for illustrative purposes.

In one embodiment of the invention, the entries 260 are created and

managed by recipients through an interface to a database 250 owned and managed by a

5   database management/registration organization. Although recipients can manage the

entries 260, the organization is responsible for registering the recipients and ensuring

that only registered recipients access the database 250. Other responsibilities of the

database management organization may include removing unused or expired entries

260, ensuring that all postal address entries meet the mandated address format and

10   content guidelines required by applicable mail handling entities, and preventing

objectionable or duplicate entries 260 from being registered in the database 250.

In one embodiment of the invention, a software program may ensure that

any proxy address 120 entered into the database 250 adheres to the predefined

addressing rules of the present invention. A specific addressing protocol must be

15   established in order for the proxy addresses 120 to be recognized as such by mail

handling entities (e.g., USPS, Federal Express, corporate mail department). The

addressing protocol of one potential embodiment of the present invention requires that

the proxy address 120 include an identifier (e.g. leading keyword or symbol) that alerts

the mail handling entities that the database 250 must be queried to obtain the postal

20   address of the intended recipient. As another example of potential proxy address

protocols the identifier may be a leading and/or trailing character or symbol, such as

e.g., #, %, $, &, or other available symbols. The identifier may also be a presentation

format, such as e.g., RecipientName@Home.com.

The protocol also establishes that each proxy address 120 contains a code or

sequence of alphanumeric characters that allows it to be uniquely defined. The first

5   entry 260a, for example illustrates "DoeJohn@home" as a proxy address 120 for the

recipient John Doe. This exemplary proxy address 120 contains the designation

"home" to signify that the address is a home address. The second entry 260b, includes

the designation "work" to reflect that the proxy address is a work/office address.

Although not required by the addressing protocol of the invention, designations such as

10   "home," "work," "office" or other mnemonics and/or intuitive language would help

the sender identify and remember the purpose of proxy address 120 and the destination

of mailpieces so addressed. The first entry 260a also includes a recipient postal address

256 that will contain all of the information necessary for the mail handling entity to

deliver a mailpiece 120 (FIG. 2) to John Doe's home.

15   The remaining example entries 260 in the database 250 reflect a non-

exhaustive listing of proxy address formats and/or protocols 120. Some of the entries

260 (e.g., entry 260a, 260b, 260e) are similar to the electronic mail (e-mail) address

format used to send e-mail via computers. Due to increased adoption and use of e-mail,

a proxy address 120 that is the same as, or similar to, a recipient's e-mail address could

20   be used by the invention. By using the same address, messages can easily be addressed

to an intended recipient for delivery via either postal mail or electronic mail. It should

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be noted that these entries 260 are mere examples and that the invention is not limited

to the specific entries 260 or their format illustrated in FIG. 3. All that is required to

practice the invention is a predetermined protocol (i.e., set of rules) for the proxy

addresses 120 and a method of ensuring that the proxy addresses 120 adhere to the

5   protocol. As noted earlier, a database management/registration organization would

most likely perform these functions.

In addition to information relating proxy addresses to postal addresses, the

database 250 may include various entries that enhance system functionality. For

example, the database 250 may contain entries that provide detailed mail handling

10   instructions. To accomplish such, the database 250 can include instructions for mail

forwarding, temporary hold of mailpieces 10, and routing mailpieces 10 between

physical locations. A "timeout" and/or "limited-use" feature can also be implemented

using the present invention. That is, there can be an entry 260 in the database 250 that

alerts the mail handling entity that mailpieces should not be delivered to this address

15   after a certain date (e.g., the proxy address 120 is no longer valid). By adding to or

modifying the database 250 to associate delivery dates with specific recipient postal

addresses, recipients can accurately direct mail to a proper location. Because all of this

information appears in the database 250, the instructions can be implemented without

filing papers with the mail handling entity and without informing the sender. Thus, the

20   mail handling instructions can be implemented in an efficient and easy manner.

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Additional data entries may also indicate that a recipient desires to track

received mail in an easy and efficient manner. The tracking of mail could be useful

when implementing a pre-paid postage system or other value added service. The

tracking of mail based on a recipient could also be used to analyze the recipient's mail

5   flow.

For example, the database 250 may incorporate any or all of the following

elements depending upon the application desired. To provide pre-paid postage

functionality, the database 250 may include the following exemplary information for

each proxy address 120: mail handling entity account/meter number information as

10   necessary for correct posting of postage payments and for use in cancellation marking

and tracking; current postage credit amount; historical data regarding postage amounts

and usage.

To provide mail hold functionality, the database 250 may include the

following exemplary information for each proxy address 120: date information for

15   commencement and conclusion of mail hold period; historical data regarding mail hold

requests. Further, in order to provide information regarding alternative postal

addresses, the database 250 may include the following exemplary information for each

proxy address 120: multiple fields containing registrant defined alternative postal

addresses; and date fields describing scheduled commencement and termination for

20   usage of alternative postal addresses.

24

To provide information regarding temporary proxy addresses 120, the

database 250 may include the following exemplary information for some proxy

addresses 120: a data field identifying the temporary status of a proxy address; data

regarding number of times database queries may relate a temporary proxy address to a

5   postal address; data regarding the number of times a database query has related a

temporary proxy address to a postal address; expiration data for temporary proxy

addresses; and instructions regarding mail handling at conclusion of a temporary proxy

address duration.

Moreover, to provide additional information regarding proxy address

10   recipients, the database 250 may include the following information for each proxy

address 120: data fields containing phone number, fax number, web address, e-mail

address, biographical or business data. It should be appreciated that many recipients

will desire to keep information entered into the database 250 confidential, therefore

various fields within the database will be provided to designate which information will

15   be available for public viewing, searches or disclosure.

It should be appreciated that these are just some examples of the numerous

possibilities that exist for the database 250 and the services that can be provided by the

present invention.

Referring now to FIGS. 2-4, an exemplary method 200 of delivering a postal

20   mailpiece 110 containing a proxy address 120 is now described. The method 200 uses

25

a proxy database 250 that has been created and maintained in accordance with a

predefined registration based mail-addressing protocol of the invention. The method

200 may be performed manually by mail handling personnel, automatically with use of

mailpiece handling computerized equipment, or a combination of manual and

5   automatic steps. If any portion of the method 200 is performed automatically by

computerized equipment, then the method 200 could be implemented in software, and

both the method 200 and database 250 could be stored on a computer readable storage

medium, such as a CD-ROM, floppy disk, or a hard drive.

The method 200 begins at step 202 by detecting that a mailpiece 110

10   includes a proxy address 120 instead of the conventional recipient postal address 20

(FIG. 1). As noted earlier, this step could be performed by mail handling personnel

who look at the mailpiece 110 and recognize one of the proxy address identifiers such

as e.g., the symbols #, $, %, or &, or recognizes the presentation format of the address

120 such as e.g., "DoeJane@work." This step could also be performed by the

15   automated mail handling equipment of a mail handling entity (e.g., USPS) that has

been programmed to scan in and recognize valid proxy addresses 120.

Once a proxy address 120 has been detected, the proxy address 120 is used

to access the database 250 to obtain a corresponding recipient postal address (step

204). As will be described below with respect to FIG. 5, the mail handling entity will

20   have access to the database 250 via a computerized communication medium, such as a

computer network or the Internet. It is also possible for the mail handling entity to

26

have its own copy of the database 250, if desired, which can be accessed locally without

using a network connection. At step 206 the corresponding recipient postal address is

obtained from the database 250.

Once the recipient postal address is obtained, it is placed on to the mailpiece

5   110 so that it may be properly delivered to the intended recipient (step 208). It should

be noted that the obtained recipient postal address might be affixed to the mailpiece in

human readable form (i.e., text), computer readable form (i.e., barcode), or a

combination of human and computer readable form. Current mail handling systems

place bar codes on each mailpiece 110 such that sorting equipment can sort them for

10   subsequent delivery and thus, it may be desirable to have both computer readable and

human readable information on the mailpiece 110 to identify the recipient postal

address. It should be noted, however, that the manner by which the obtained recipient

postal address is affixed to the mailpiece and the format used is not important so long as

the mail handling entity can deliver the mailpiece 110 to the recipient. Moreover, if the

15   mail handling entity can deliver the mailpiece 110 without affixing the obtained

recipient postal address to the mailpiece 110, then step 208 is not required.

At step 210 the mailpiece 110 is delivered to the recipient at the physical

address associated with the postal address obtained from the database 250. Thus, the

mailpiece 110 is delivered to the recipient while the sender used only a proxy address

20   120. In doing so, the mailpiece 110 was delivered to the recipient without the sender

knowing the recipient's physical location. Moreover, since the proxy address 120 is

designed to be easily remembered and transcribed onto the mailpiece 110, the

likelihood that the sender was inconvenienced or made an error during the postal

process is substantially reduced. Moreover, since the proxy address 120 does not

include a postal address, it does not have to change if the recipient relocates.

5   Referring to FIG. 5, an exemplary embodiment of a system 300 for

implementing the present invention is now described. The system 300 includes a web

server 302, an applications server 312, a database server 320, user interface 308 for user

registration, messaging system 322 for data synchronization, software interface enabling

data transfer with mail handling entities, and management and reporting tools 310.

10   The system elements may reside on one or many computers either in whole or in part.

However, the exemplary system 300 illustrated and now described comprises multiple

hardware and software elements connected via a communications medium such as a

computer network (e.g., wide area network, Internet).

           In the exemplary embodiment, a proxy address registration and management

15   subsystem 301 is composed of web servers 302, applications servers 312, database

servers 320, and associated software including a user interface. The system 300 is

designed to be multi-tiered. User requests will be routed through web servers (e.g.,

server 302), then through application servers (e.g., server 312) to the database server

320. An embedded application 314 consisting of a presentation layer 316 and business

20   logic 318 communicates with the database management subsystem (DBMS) 301

through a standard Java database connectivity (JDBC) layer. The presentation layer

28

316 may be implemented utilizing JavaServer Pages and XML to allow consistent and

efficient data across devices. In an exemplary system embodiment, the web and

application servers 302, 312 could be Sun Microsystems Enterprise Server 4500

machines and the database server 320 could be a Sun Microsystems Enterprise Server

5   10000 machine, each running under the Solaris 7.0 Operating Environment.

Exemplary server applications for the web servers 302 and application servers 312 may

be Apache HTTP web server and Bluestone Total E Server respectively. In addition, an

Oracle database management system could be utilized for database functionality in the

exemplary embodiment now described. Such an embodiment would allow heavy

10 utilization of the registration system 301 and provide compatible operability with other

system elements.

In another exemplary embodiment, the primary database 250 will comprise a

table of identifiers for the recipient proxy address, recipient name, postal address,

username, password and other data fields as deemed necessary for functionality and

15 robust operation. To facilitate delta data loads, any additions or modifications will be

time stamped and checked against effective date for this purpose. The primary function

of the primary proxy address database 250 is to store the relationships between proxy

addresses and postal addresses and allow mail recipients to actively manage that

information.

Exemplary properties of the proxy address user interface 308 include: proxy

registration in accordance with system guidelines and prevention of duplicate

registrations, secure registration accomplished through username/password protection,

or other protection, of all entries, and flexibility to define proxy address-postal address

5   relationships as fits the needs of system users.

In one exemplary embodiment, access to the user registration and

management subsystem 301 is via a web interface 308, web-based tools 310, call center

operations 304, or other information device such as a wireless phone or personal digital

assistant (PDA) 306.

10   An exemplary illustration of a typical user interface operation now follows.

Upon entering the system 300 via a web page, users (e.g., mail recipients) will be able

to register with the system 300 by providing a name, username and password.

Afterwards, they will be allowed to enter a proposed proxy address. Once the user-

entered proxy address has been validated with persistent store, the user will be able to

15   create a link between the proxy address and a validated postal address. The proxy

address and postal address can then be stored in the proxy address database 250.

In an exemplary embodiment of the system 300, data from the primary proxy

address database 250 is distributed to locally stored proxy address databases (e.g.,

database 334) at the individual mail handling sites. This allows rapid processing

20   without risk of delay caused by far reaching communications systems. The messaging

system 322 accomplishes necessary distribution and synchronization between the

primary proxy address database 250 and a distributed database 334 utilized by

automatic mail handling equipment of mail handling entities. The messaging system

322 can best be described as a hub/spoke relationship. A hub is typically a central

5   point that distributes data over a wide range of remote clients, which may have disparate

transfer protocol and data format requirements. The hub acts as the dispatcher and is

responsible for proper data formatting and transfer protocol. The receivers, or spokes,

are responsible for remaining available to receive data and for providing data handlers to

process received information. In this exemplary embodiment, the hub is a software

10   layer residing on the database server 320 and the spokes are software layers residing on

spoke servers 330 at the mail handling entities.

An exemplary embodiment of the messaging system 322 is comprised of a

scheduler 324 and a message queue 326. The scheduler 322 may be used to configure

the moments in time when data retrieval from the primary proxy address database 250

15   is performed. The data retrieval is used for synchronizing the proxy address database

250 with local databases (e.g., database 334) used by mail handling entities. At the

scheduled time, the scheduler 322 will call for the retrieval of data that has been created

or altered since the time of the last synchronization, create a batched data file for

distribution, and transmit the data file into the message queue 326. It will be

20   appreciated that the exemplary embodiment provides for the distribution of a delta file,

meaning that only data that has been changed will be transmitted. It is also

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contemplated that the scheduler 324 will initiate data distribution on a frequent

periodic basis (e.g. daily, hourly) during a non-peak time for the systems of recipient

mail handling entities.

Once data has been received from the scheduler 324, the message queue 326

5   is responsible for guaranteeing delivery of the data file to mail handling entity databases

334. If the recipient spoke servers (e.g., servers 330) are down, the message queue 326

will attempt delivery until the file is delivered or the queue times out. Queue time out

will cause an error message and e-mail/pager notification to a system administrator. If

synchronization is based only on changed data, it is important that the subsystem 301

10   and local systems be synchronized at every cycle. Data transfer may be performed by

secure means; an example embodiment may utilize the HTTPS or public/private key

protocols.

In another exemplary embodiment, transfer of data between the subsystem

301 and the distributed servers 330 of mail handling entities will occur via a systems

15   interface that will allow transfer of data without systems integration. In order to

accomplish this objective, two intervening layers are necessary -- the spoke server

software and an adapter layer implemented as a document handler 332.

In the exemplary embodiment, spoke (i.e. recipient) software listens and

receives the data files and passes them on to the document handler 332. The spoke

20   software is a communication layer between the subsystem 301 and the automation

systems of mail handling entities. This software layer is implemented as an

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asynchronous, continually running process that activates the document handler 332

after it has received a data synchronization file. The spoke software may reside on a

dedicated machine or be a part of the resident database servers 330 of mail handling

entities.

5   The adapter layer/document handler 332 may be responsible for parsing the

data file and translating it into the proper form for the mail handling entity database

334. In addition to providing data translation functionality, the document handler 332

will affect the load of data into the mail-handling database 334 and log success/failure

along with number of records added or modified. Updates should be guarded in

10   commit/rollback blocks to preserve data integrity. The system 300, as structured in

this exemplary embodiment, can support a variety of database implementation scenarios

at mail handling entity sites. A non-exhaustive list of implementation scenarios

includes: a dedicated proxy address database residing on a local computer and

integration of proxy address information into existing database structures. It will be

15   appreciated that details of database implementation at postal processing sites will vary

according to the process and hardware extant at those processing sites.

In an exemplary embodiment of the system 300 it is assumed that a postal

processing site is equipped with optical character recognition (OCR) or other image

capture equipment that lifts address images from mail pieces, and such other equipment

20   or personnel necessary to translate physical address information into an electronic

format recognized by the mail processing system. Through use of mandated proxy

address identifiers or a mandated presentational format, mail-handling entities will

identify those addresses that conform to proxy address standards. Once recognized and

transformed to an electronic form, the proxy address is compared to a locally stored

copy of the proxy address database 250 that contains proxy address information and

5 corresponding postal addresses. In an exemplary embodiment using an SQL query

structure and the exemplary database 250 illustrated in FIG. 3, a database query would

take the form: SELECT RECIPIENT NAME, RECIPIENT POSTAL ADDRESS

FROM PROXYADDRESSDATABASE WHERE PROXYADDRESS =

'DoeJane@Work'. The exemplary query result would then be: 'Jane Doe' 'WORK

10 NAME 2101 WORK STREET WASHINGTON DC 20037.' Upon successful

resolution of the database query, the postal processing equipment could then utilize

automated labeling equipment or in-line printers to apply the retrieved postal address

information to the mail piece. After the postal address has been printed on or affixed to

a mail piece, delivery is accomplished through established practice.

15   Data management and reporting tools 310 with a management interface will

be necessary to configure, and maintain the system 300. In an exemplary embodiment,

the data management interface would allow the administrator to configure the

scheduler, start/stop the hub, rollout new functionality, and provide metrics within

regarding the system 300. Additional tools would provide functionality to add, edit

20 and view user proxy addresses.

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It should be noted that the present invention could be used world-wide as a new form of delivering mail throughout the United States and Internationally in public, private and corporate mailing environments. Since the invention is easily accessible from the Internet, recipients throughout the world can register and gain access to the

5   proxy address database 250.

Moreover, the invention offers methods of doing business for the database management/registration organization. For example, the organization can market and sell the invention as an internal mailing system for a corporation, law firm, organization, or other entity. The invention can be sold as a software application to the organization,

10   which allows the organization to set up its own proxy address database for its employees and/or customers. Employees could send mailpieces to other employees, customers, clients, vendors, or other entities using a proxy address. The organization's mail room would access the organization's proxy address database (or a world-wide database if authorized) to obtain the recipient postal address, place postage on the mailpiece and

15   then cause the mailpiece to be delivered (e.g., via USPS). The invention would be extremely suitable for organizations that have many offices, clients, vendors, or other entities spread throughout the world.

The present invention could be used by some organizations to externalize their internal mail handling as well. The organization can set up proxy addresses, use

20   the proxy addresses on its outgoing mailpieces and deposit them in a public mail system rather than utilize an expensive and cumbersome internal mail system.

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The present invention is useful to both individuals and businesses for a multitude of purposes, too numerous to list. The present invention could be used for advertising and marketing purposes. That is, a proxy address 120 is a powerful brand management tool, reinforcing the identity and name of a company or product at a

5   broader array or customer interactions. For example, a company may register the trade name of a popular brand or product, thereby facilitating increased mail communication from consumers. By advertising the proxy address 120, the company further publicizes the brand or product name improving consumer awareness and perception.

In addition, the invention is useful for response marketing. Marketing

10   campaigns that require a specific consumer action in order to be effective will benefit from proxy addresses 120 and the present invention through increased customer response. A television advertisement encouraging viewers to write to "AAA Computer Training" for information on computer training classes will have a higher response rate than an advertisement requiring the usage of lengthy and complex postal address.

15   Moreover, customer service can benefit from the invention. Customer initiated interactions will be facilitated through the use of the present invention. Customer comments, complaints and thanks can be easily sent using the key elements of a product or company name. For example: "Painless Dentistry Complaints." Contests, campaigns and fund raising can benefit from the invention as well. Proxy

20   addresses 120 provide an easily managed, flexible address for entities with changing needs and sudden increases in mail usage. A political campaign may be able to accept

thousands of mailed donations at out sourced processing facilities during peak

fundraising months, and then route mail to campaign offices during less intensive times.

Another example of the particular utility to fundraising entities is illustrated by

potentially higher response rates to radio fund drives if pledge monies can be mailed to

5   the station call letters (e.g. KQED Fund Drive) instead of a complex postal address.

Image management can be fostered by the invention. Large institutions with

a presence in primary business markets seek to maintain a prestigious image. However,

many customer-response and back-office functions may be based in less-prestigious

business areas. Use of a proxy address 120 identifying the company and the customer

10   service function (as opposed to its physical location) will allow incoming mail to flow to

processing centers without disclosing their location to brand-conscious customers.

Mail flow management will also benefit from the invention. Businesses can

easily re-direct mail flows to attain higher levels of efficiency without bearing the

expense and difficulty of reprinting product and company literature. A single address

15   management action may cause customer service mail relating to a rapidly growing

product line to be re-directed from a general response facility in one location to a

specialized resource in another location. In addition, businesses may choose to provide

proxy addresses 120 to key customers to reduce the toll of lost or misdirected

correspondence. For example, many credit card issuers focus on college students, who

20   move frequently. By providing students/customers an easily managed proxy address

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120, the risk of lost or misdirected mail sent to frequently moving students would be reduced.

In addition to straightforward postal address management and simplified mail-addressing, potential embodiments of the present invention can provide numerous
5   value-added services. For example, database management organization will verify that all postal addresses in the proxy address database comply with the addressing standards of relevant mail handling entities. Such verification includes certification of address existence and addressing format in addition to steps necessary to allow mailpiece bar coding and subsequent efficient automated handling.

10   Proxy address recipients can provide pre-paid postage for mail sent to a proxy address 120. Address recipients would pre-pay postage through the database management organization, creating a postage credit to be recorded in a secured database field of the proxy address database 250. When automated handling equipment determines that a mailpiece bears a valid proxy address and further determines that the
15   mailpiece does not have a postage marking, the system will query the proxy address database 250 to determine the availability of sufficient postage credit for delivery of the mailpiece. If sufficient credit exists, the mailpiece postage area is cancelled (post marked) and the postage credit is debited an appropriate amount.

As noted above, the invention can be used for temporary mail holding. As a
20   portion of the database management functionality, proxy address recipients will have user interface functionality that allows them to specify a "mail hold" period relative to a

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particular proxy address. Such information would direct mail carriers to hold mail in

the same way existing mail hold services are provided. Similarly, temporary mail

forwarding capabilities can also be achieved with the invention. Proxy address recipients

may modify corresponding postal addresses permanently, or on a temporary basis. For

5   example, by allowing proxy address recipients to record an expiration date or scheduled

modifications for a modified proxy address/postal address relationship.

As noted above, some individuals or businesses may wish to keep address

information confidential, while others may wish to allow members of the public to

search database contents to allow determination of proxy addresses, postal addresses or

10   other information. Information access rules can be established at the time of proxy

address registration and modified from time to time by recipients. Moreover, the

invention allows the use of temporary addresses. Proxy address recipients may have the

option of stating the number of times an address may be used, or the period of time it is

valid. Once the established delivery conditions are no longer satisfied, queries of the

15   proxy address database 250 will result in a "Return to Sender" instruction for postal

processing. The invention can be used for address convergence. That is, proxy

addresses 120 that reflect, or are the same as, other information addresses may be of

value to some individuals and companies. For example, a company may wish to

establish a proxy address 120, e-mail address and toll-free phone number for a new

20   product or service introduction.

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It should be noted that information regarding proxy addresses 120 may be collected, registered and managed through the use of various methods including: input by computers, through the use of computer networks (Internet/intranet), via automated telephone entry using keypad or voice input, via inbound telephone call

5   center operations, via outbound telephone call center operations, via US Mail or other mail handling entity, through direct employed sales personnel, via retail POS (point of sale), trade show, or entertainment partners/registrars. Automated generation of proxy addresses 120 through computer networks based on third party registrations or data collection methods may also be utilized.

10   While the invention has been described in detail in connection with preferred embodiments known at the time, it should be readily understood that the invention is not limited to such disclosed embodiments. Rather, the invention can be modified to incorporate any number of variations, alterations, substitutions or equivalent arrangements not heretofore described, but which are commensurate with the spirit and

15   scope of the invention. For example, the individual method steps of the exemplary operational flow illustrated in FIG. 4 may be interchanged in order, combined, replaced or even added to without departing from the scope of the invention. Any number of different operations not illustrated herein may be performed utilizing the invention.

The components described herein such as the components modules making

20   up the system 300 (FIG. 5) may be one or more hardware, software, or hybrid components residing in (or distributed among) one or more local or remote systems. It should be readily apparent that the components may be combined or further separated

into a variety of different components, sharing different resources (including processing units, memory, clock devices, and software routines) as required for the particular implementation of the embodiments disclosed herein. Indeed, even a single general purpose computer executing a computer program stored on a recording medium to produce the functionality and any other memory devices referred to herein may be utilized to implement the illustrated embodiments. Interface devices utilized by, in, or in conjunction with the system 300 may be any device used to input and/or output information. The interface devices may be implemented as a graphical user interface (GUI) containing a display or the like, or may be a link to other user input/output devices known in the art.

Furthermore, memory units employed by the system may be any one or more of the known storage devices (e.g., Random Access Memory (RAM), Read Only Memory (ROM), hard disk drive (HDD), floppy drive, zip drive, compact disk-ROM, DVD, and bubble memory), and may also be one or more memory devices embedded within a CPU, or shared with one or more of the other components. Accordingly, the invention is not to be seen as limited by the foregoing description, but is only limited by the scope of the appended claims.

What is claimed is:

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1. A method of delivering a postal mailpiece, said method comprising the steps of:

detecting a proxy address on the postal mailpiece;

using the detected proxy address to obtain a recipient postal address from a

5   database of recipient postal addresses and associated recipient proxy addresses, the addresses within the database being defined by postal recipients associated with the addresses; and

affixing the obtained recipient postal address to the postal mailpiece so that the mailpiece can be delivered to a physical address corresponding to the obtained

10   recipient postal address.

2. The method of claim 1, wherein said step of detecting the proxy address comprises detecting a symbol on the postal mailpiece that corresponds to a predefined proxy addressing protocol.

3. A method of creating and maintaining proxy addresses for use with a

15   postal mailpiece, said method comprising the steps of:

inputting a proxy address;

inputting a recipient postal address associated with the input proxy address; and

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storing the proxy address and associated recipient postal address in a list of

proxy addresses and associated recipient postal addresses.

4. The method of claim 3, wherein the list is stored in a computer readable

storage medium.

5   5. The method of claim 3 further comprising the step of ensuring that the

input proxy address does not match a proxy address contained in the list.

6. The method of claim 3 further comprising the step of ensuring that the

input proxy address complies with an addressing protocol.

7. The method of claim 6, wherein the addressing protocol comprises a

10   predefined symbol used to identify the input proxy address as a valid proxy address.

8. The method of claim 7, wherein the symbol comprises at least a #

character.

9. The method of claim 7, wherein the symbol comprises at least a @

character.

15   10. The method of claim 7, wherein the symbol comprises at least a %

character.

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11. The method of claim 6, wherein the addressing protocol comprises a predefined addressing presentation format used to identify the input proxy address as a valid proxy address.

12. The method of claim 3 further comprising the steps of:

5   inputting a new proxy address associated with a first proxy address and first recipient postal address contained in the list; and

          replacing the first proxy address with the new proxy address in the list without modifying the first recipient postal address.

13. The method of claim 3 further comprising the steps of:

10   inputting a new recipient postal address associated with a first proxy address and first recipient postal address contained in the list; and

          replacing the first recipient postal address with the new recipient postal address in the list without modifying the first recipient postal address.

14. The method of claim 3 wherein the input proxy address is input from a

15 recipient associated with the recipient postal address.

15. A method of identifying a recipient postal address from a postal mailpiece comprising a proxy address, said method comprising the steps of:

          detecting the proxy address on the postal mailpiece; and

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using the detected proxy address to obtain a recipient postal address from a

list of recipient postal addresses and associated recipient proxy addresses, wherein proxy

addresses contained within the list are defined by postal recipients associated with the

proxy addresses.

5   16. The method of claim 15, wherein said step of detecting the proxy

address comprises detecting an identifier on the postal mailpiece that corresponds to a

predefined proxy addressing protocol.

17. A method of managing a delivery of a mailpiece comprising the steps of:

inputting a proxy address;

10   inputting a mail handling instruction associated with this input proxy address,

the instruction defining a manner in which mailpieces are to be delivered to a physical

address associated with the input proxy address; and

storing the proxy address and associated mail handling instruction in a list of

proxy addresses and mail handling instructions.

15   18. The method of claim 17, further comprising the steps of:

detecting a proxy address on the postal mailpiece;

using the detected proxy address to obtain at least one associated mail

handling instruction from the list; and

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delivering the mailpiece in accordance with the obtained mail handling instruction.

19. The method of claim 17, wherein the input mail handling instruction comprises mail forwarding instructions.

5   20. The method of claim 17, wherein the input mail handling instruction comprises temporary mail holding instructions.

21. The method of claim 17, wherein the input mail handling instruction comprises mail routing instructions.

22. A method of providing value-added services for a mailpiece comprising

10   the steps of:

detecting the proxy address on the postal mailpiece;

using the detected proxy address to obtain a recipient value-added service from a list of recipient value-added services and associated recipient proxy addresses; and

15   tracking a delivery of the mailpiece to provide the obtained value-added service.

23. The method of claim 22, wherein the obtained recipient value-added service comprises a pre-paid postage service.

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24. The method of claim 22, wherein the wherein the obtained recipient value-added service comprises a mail flow analyzing service.

25. The method of claim 22, wherein the obtained recipient value-added service comprises a proxy address timeout service.

5   26. A system for delivering a postal mailpiece comprising:

a computer readable storage medium, said storage medium comprising a database of proxy addresses and associated recipient postal addresses, the addresses within the database being defined by postal recipients associated with the addresses; and

a first database interface computer coupled to said storage medium by a
10   communication medium, said first database interface computer inputting a proxy address obtained from the postal mailpiece, said first database interface computer accessing said database with said input proxy address to obtain an associated recipient postal address, wherein the postal mailpiece is subsequently delivered to a physical address corresponding to said obtained recipient postal address.

15   27. The system of claim 26, wherein said first database interface computer affixes said obtained recipient postal address on the postal mailpiece.

28. The system of claim 26, wherein said communication medium is a computer network.

29. The system of claim 26, wherein said communication medium is the Internet.

30. The system of claim 26 further comprising a second database interface computer coupled to said computer readable storage medium by a second
5 communication medium, said second database interface computer providing a means for recipients to modify addresses within said database.

31. The system of claim 30, wherein said second database interface computer allows a recipient associated with a first proxy address and a first recipient postal address to modify the first recipient postal address without modifying the first
10 proxy address.

32. The system of claim 30, wherein said second database interface computer allows a recipient associated with a first proxy address and a first recipient postal address to modify the first proxy address without modifying the first recipient postal address.

15 33. The system of claim 30 further comprising a third database interface computer coupled to said computer readable storage medium by a third communication medium, said third database interface computer providing a means for recipients to register with said system and become authorized to modify addresses within said database.

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34. A system of identifying a recipient postal address from a postal mailpiece comprising a proxy address, said system comprising:

means for detecting the proxy address on the postal mailpiece; and

means for using the detected proxy address to obtain a recipient postal

5   address from a list of recipient postal addresses and associated recipient proxy addresses, wherein proxy addresses contained within the list are defined by postal recipients associated with the proxy addresses.

35. The system of claim 34, wherein said detecting means comprises means for detecting an identifier on the postal mailpiece that corresponds to a predefined

10   proxy addressing protocol.

36. An article of manufacture comprising a machine-readable storage medium having stored therein indicia of a plurality of machine-executable control program steps, the control program comprising the steps of:

detecting a proxy address on a postal mailpiece;

15   using the detected proxy address to obtain a recipient postal address from a list of recipient postal addresses and associated recipient proxy addresses; and

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delivering the mailpiece to a physical address corresponding to the obtained

recipient postal address, wherein proxy addresses contained within the list are defined

by postal recipients associated with the proxy addresses.

37. The article of manufacture of claim 36, wherein the control program

5   further comprises the step of modifying the list of recipient postal and proxy addresses

by recipients authorized to modify the list.

38. The article of manufacture of claim 36, wherein said step of detecting

the proxy address comprises detecting an identifier on the postal mailpiece that

corresponds to a predefined proxy addressing protocol.

10   39. An article of manufacture comprising a machine-readable storage

medium having stored therein indicia of a plurality of machine-executable control

program steps, the control program comprising the steps of:

inputting a proxy address;

inputting a recipient postal address associated with the input proxy address;

15   and

storing the proxy address and associated recipient postal address in a list of

proxy addresses and associated recipient postal addresses.

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40. The article of manufacture of claim 39, wherein the list is stored in a computer readable storage medium.

41. The article of manufacture of claim 39, wherein the program further comprises the step of ensuring that the input proxy address does not match a proxy

5   address contained in the list.

42. The article of manufacture of claim 39, wherein the program further comprises the step of ensuring that the input proxy address complies with an addressing protocol.

43. An article of manufacture comprising a machine-readable storage

10   medium having stored therein indicia of a plurality of machine-executable control

program steps, the control program comprises:

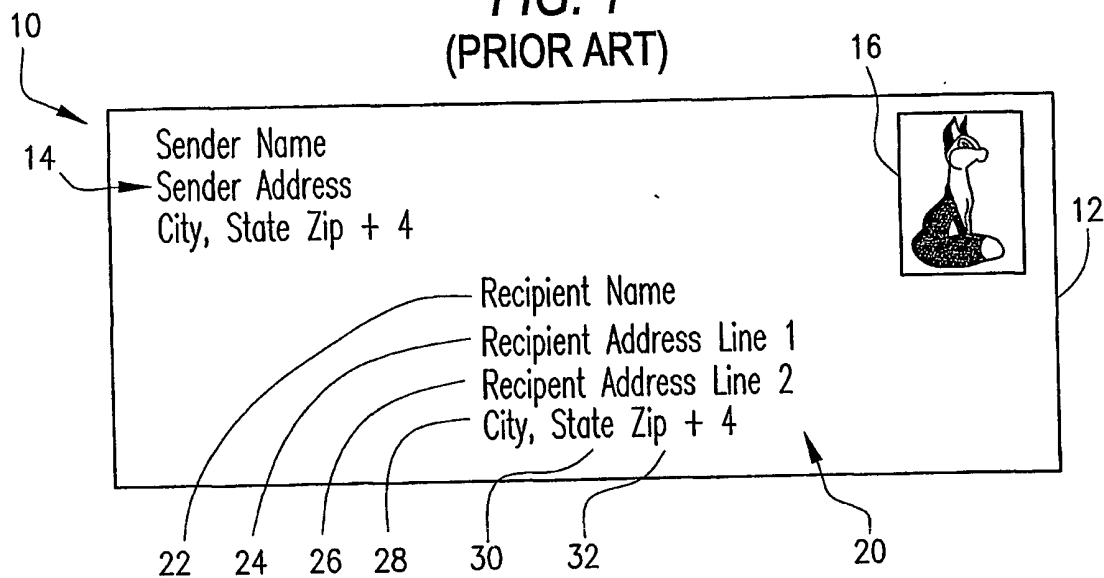detecting the proxy address on the postal mailpiece; and

using the detected proxy address to obtain a recipient postal address from a

list of recipient postal addresses and associated recipient proxy addresses,

15   wherein proxy addresses contained within the list are defined by postal

recipients associated with the proxy addresses.

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44. The article of manufacture of claim 43, wherein said step of detecting the proxy address comprises detecting an identifier on the postal mailpiece that corresponds to a predefined proxy addressing protocol.

45. The article of manufacture of claim 43, wherein said step of detecting the proxy address comprises detecting a predetermined presentation format that corresponds to a predefined proxy addressing protocol.

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FIG. 1
(PRIOR ART)
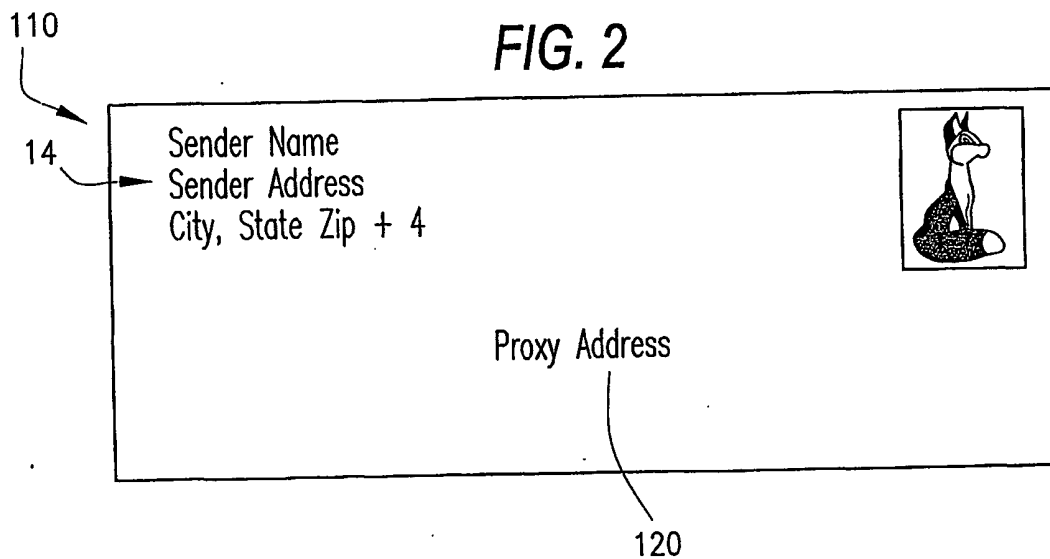
Sender Name
Sender Address
City, State Zip + 4

Recipient Name
Recipient Address Line 1
Recipent Address Line 2
City, State Zip + 4

10 14 16 12 20
22 24 26 28 30 32

FIG. 2

Sender Name
Sender Address
City, State Zip + 4

Proxy Address

110 14 120

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Proxy Address Database		
Proxy Address	Recipient Name	Recipient Postal Address
DoeJohn@home	John Doe	1313 Mockingbird Lane Los Angeles, CA 12345-1234
DoeJane@work	Jane Doe	Work Name 2101 Work Street Washington, DC 20037
#Robert Smith#	Robert Smith	11 Champion Street New York, NY 10001-1994
#James Johnson@home#	James Johnson	461 Ocean Boulevard Annandale, VA 22003
%TippyTanner@skiing%	Lawrence Tanner	120 Market Street San Francisco, CA 94010
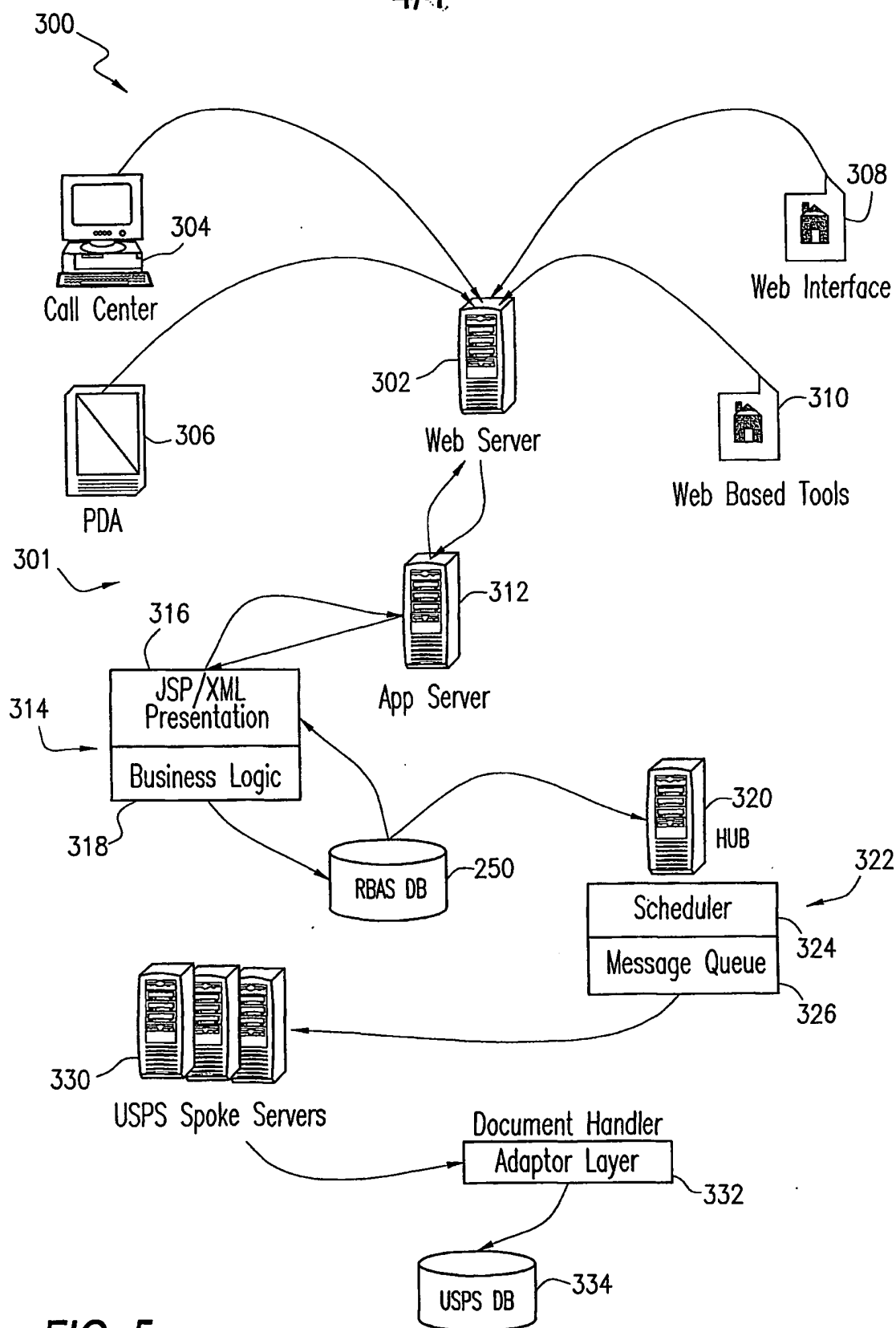
FIG. 3

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200

```
         ┌─────────┐
         │  Start  │
         └────┬────┘
              │
              ▼
```

┌──────────────────────────────┐
│ Detect that recipient address │
│ on postal mailpiece is a   │ 202
│ proxy address   │
└──────────────────────────────┘

┌──────────────────────────────┐
│   Access database using   │
│   detected proxy address   │ 204
└──────────────────────────────┘

┌──────────────────────────────┐
│   Obtain recipient postal   │
│   address from database   │ 206
└──────────────────────────────┘

┌──────────────────────────────┐
│   Place recipient postal   │
│   address on mailpiece   │ 208
└──────────────────────────────┘

┌──────────────────────────────┐
│   Deliver mailpiece to   │
│   recipient at recipient   │ 210
│   physical address   │
└──────────────────────────────┘

```
         ┌─────────┐
         │  Stop   │
         └─────────┘
```

FIG. 4

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FIG. 5

INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7)   :   H04K 1/00, 9/00; G06F 17/00, 9/00; G07B 17/02
US CL   :   705/74, 408, 410

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
     U.S. : 705/74, 408, 410

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 2001/0044785 A1 (STOLFO et al) 22 November 2001(22.11.2001), whole document	1-45
Y	US 6,125,357 A (PINTSOV) 26 September 2000 (26.09.2000), whole document	1-45
Y,P	US 6,175,827 B1 (CORDERY et al) 16 January 2001 (16.01.2001), whole document	1-45
Y,P	US 6,260,029 B1 (CRITELLI) 10 July 2001 (10.07.2001), whole document	1-45

☐ Further documents are listed in the continuation of Box C.   ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	
"E" earlier application or patent published on or after the international filing date	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
26 February 2002 (26.02.2002)	1 2 APR 2002
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer Safet Metjahic James R. Matthews Telephone No. 703- 305- 3900

Form PCT/ISA/210 (second sheet) (July 1998)